

## REVIEWS.

ART. XI. *Traité de Pathologie Générale*, par E. Frédéric Dubois, (D'Amiens,) Professeur agrégé à la Faculté de Médecine de Paris, &c. &c.

*"Docenti autem procedendum est à generalibus ad singularia quæque, dum inventa explicat; ut inventori contrà à Singularibus ad generalia eundum fuit. BOERHAAVE, Inst. Med."* 8vo, 2 vols. pp. 599, 585. Paris, 1835.

*A Treatise on General Pathology*, by E. F. DUBOIS, of Amiens.

As a science, general pathology has existed only within a very recent period. Previously to the development, by Bichat, of the details of general anatomy, its real character and scope were absolutely unknown. Since then, however, numerous observers have devoted their talents and industry to its cultivation, by the result of whose labours this branch of pathology has now become invested with a peculiar degree of interest and importance.

Investigating the characters of the several morbid states to which the different textures of the organism are liable, in connexion with the causes by which they are produced, and the modifications in the functions and anatomical conditions of the parts affected, to which they give rise, it must be evident that *general* pathology constitutes an indispensable introduction to the study of *special* pathology. Without, in fact, an intimate acquaintance with the first, it will be impossible to acquire correct and satisfactory views in relation to the latter.

The work of M. Dubois, is, we believe, the most recent treatise that has appeared, purporting to present a complete exposition of the science of general pathology. How far it deserves this character will, however, admit of some dispute. It appears to us that the author has, in some degree, mistaken the real province of this branch of pathology, and by describing diseases as they affect the different organs and apparatus, has intrenched to a very considerable extent upon that of special pathology. This, though it changes materially the character of the work, does not in the least detract from the importance of the several subjects which it embraces. It is the manner in which these are treated that will demand our attention on the present occasion.

The treatise before us is divided into three grand sections. In the first, "which corresponds to the older treatises on general pathology," the author examines disease in its most general point of view, in reference to causes, symptoms, anatomical lesions, &c.

"In the second section are comprised those diseases which may affect many systems of the animal economy, either successively, symptomatically or simultaneously, becoming progressively, or at once, general.

"In the third section, the diseases of *each system* are examined in a general manner."

Under the head of diseases, M. Dubois includes all the surgical accidents, fractures, wounds, burns, congelation, contusions, dislocations, &c. Although we do not object to a consideration of these being embraced in a system of general pathology, simply as accidents to which the different tissues of the organism are liable, yet there is a certain looseness in the manner in which they are introduced in the present work, which is calculated, we fear, not a little to confuse the mind of the student. The accidents referred to above cannot with propriety be considered as diseases; they may—many of them do invariably—produce a morbid condition of the different textures in their immediate vicinity, or in those more remotely situated, and hence they are to be ranked, in a system of general pathology, among the occasional causes of disease.

At the close of each disease, the author presents a general, and we may add, a highly interesting sketch of its mode of treatment. This is likewise, in our opinion, travelling beyond the limits of general pathology, though we confess we should not desire the omission of the very excellent therapeutical directions contained in the work before us. Pathology, according to its etymology, will, it is true, include every thing relating to disease, but it is now invariably used in a more limited sense. Arguments drawn from the effects of remedial agents are occasionally useful in illustrating the nature, causes, and even the seat, of diseases, but the general consideration of the treatment of the morbid states of the organs or tissues does not certainly constitute a legitimate branch of pathology.

The first section of the work is devoted, as we have stated, to the consideration of disease in general, without reference to its particular seat. In the initial chapter, after comparing the study of the physical with that of the medical sciences, and presenting a few remarks upon the division of pathology into different branches, M. Dubois presents us with the following as his views in regard to the province of general pathology.

"If general anatomy embraces all that relates as well to the structure of the organism, considered as a whole, as to the different systems of which that organ-

ism is composed, it is perfectly natural to conclude, that general pathology should equally embrace every thing that concerns the abnormal condition both of the entire organism and of its several parts."

In the above sentence the author has evidently misstated the province as well of general anatomy as of general pathology. General anatomy embraces the structure and properties of the simple textures, "the organized elements," as Bichat styles them, of the animal body, and, according to our conception of general pathology, it is an investigation into the morbid changes occurring in the vital properties and organization of these simple textures—the history of the elementary forms, if we may so express ourselves, of disease.

The chapter closes with a definition of health and of disease. Upon the latter the author's remarks are laboured, but, at the same time vague and unsatisfactory. He passes in review the several definitions offered by different writers, to the whole of which he objects. His objections are, however, not always founded upon very satisfactory reasons, nor very clearly expressed. In this and other portions of the work, M. Dubois, when treating of the peculiar views of Broussais, has evinced a degree of personal animosity towards the latter, and a desire to undervalue the importance of the pathological doctrines advanced by him, which, notwithstanding an occasional expression of faint praise, exhibits not a little want of candour and liberality. In some instances, when he has attempted to exhibit the absurdity and contradiction of certain of the propositions of M. Broussais, we are under the necessity of presuming that he has misunderstood their meaning, or of accusing him of a wilful misrepresentation of their real bearings and of the conclusions deducible from them.

According to M. Dubois, disease consists in a derangement of the vital actions of the organism, totally independent of any degree or species of anatomical lesion. In attempting to arrive at a proper definition of the nature of disease, he remarks, "we should not examine into the *state* or *condition*, (ce que est) but into the *actions* (ce que fait) of the organism. In other words, disease consists merely in a derangement of function, or as the author expresses it, in a general or local reaction, occurring under the influence of certain morbid causes. Hence he declares "there is no disease but when the organism has had time to react." "Diseases being, therefore, vital acts, cannot be located."—"The (morbid) acts are executed by the organs, but not located in them." These propositions M. Dubois considers of fundamental importance, as leading to the true character and relation of the different morbid affections to which the organism is liable.

"As for us," he remarks, "who are likewise vitalists, we recognise, as we shall

prove in our section on organic lesions, that in every disease the primary lesion is essentially vital; that there is always in the commencement a lesion of innervation. We recognise, besides, that, most generally, there is a tendency in disease, that is to say, in the modifications impressed upon the forces which govern the acts of the living molecules, to return to the normal state; while in other cases there is a tendency to the most complete disorganization; that is, a tendency directly the reverse of that supposed by medical optimists. We recognise finally, that Reil has, very correctly, after the example of the ancients, given the name of *reaction* to that series of vital modifications which follow the action of a morbid cause. This necessity of a reaction to the existence of disease being admitted, many difficulties are removed. In the first place, the difficulty of fixing upon the seat of many diseases. Is the reaction local? It is sufficient that we ascertain the point at which it commenced, the part by which the impression of the morbid cause is experienced. Does the reaction become general? We know the *organs* by which it is executed. All that remains, therefore, is to ascertain the mode of action of the cause; whether it be external, or has been developed within the organism. In all cases it is the organs which produce the morbid actions, but we cannot therefore say that those actions—in other words, the disease—has a seat.

"Another difficulty that is removed, is that of determining, in many instances, the point at which the disease commences. Various organs may be the seat of tubercles; to produce these requires a local morbid *phenomenon*; but so long as these tubercles do not excite a reaction, there is no disease; there merely exists an eventual cause of disease, the same as in the case of entoxication. An individual is deprived of one of his external senses. When all the accidents excited by the cause which has produced this deprivation have disappeared, there is no longer any disease: the organism accommodates itself to this as to every other mutilation. Another individual has a hernia, this is merely an infirmity, so long as it occasions no disturbance of any function of the body.

"With respect even to disturbances of function. Are they excited physiologically—are they the immediate effect of a physiological movement, as in the case of the menstrual flux, the expulsion of the fetus, &c.? there is then no disease. In a word, for disease to occur, it requires that the reaction should be abnormal, or exceed the physiological limits."

The foregoing sentences contain many remarks which, though very common-place, are nevertheless to a certain extent correct; these are, however, combined with others that are evidently founded in error. The normal functions of the system especially, can in no instance be ranked, as they are by the author in the sentence quoted above, among disturbances of the vital actions.

The whole of M. Dubois's observations upon the nature of disease, generally considered, are rendered obscure and contradictory, and his leading deductions inaccurate, from his having confounded, in many instances, the remote effects of disease with disease itself; and from his having applied the same general term to the abnormal state of the simple textures, and also to the whole series of morbid phenomena thence resulting. In investigating the nature of disease it is as necessary to examine into the condition of the organs as into the derangements of functions which they exhibit. The latter cannot with

propriety be considered, as the author has apparently attempted, independently of the former.

All diseases consist primarily and essentially in an abnormal modification of the vitality of one or more of the simple tissues of which the different organs are composed, giving rise invariably to a derangement of function, often to a change, more or less extensive, in the organic or anatomical condition of the part affected. In many cases the modification of the vitality of a tissue has, it is true, a tendency very readily to give place to its normal state; in other instances the modification may occur in a tissue entering into the composition of an organ, the integrity of the functions of which is essential to life; here death often takes place without the occurrence of any anatomical lesion whatever. It likewise frequently happens, that disease extends from the part primarily affected to some other tissue or organ, and terminates fatally, without any perceptible change being produced in the organization of that in which it commenced.

Pathologists, it is true, have not, as yet, and perhaps never will be able to discover the nature of that change in the vitality of the tissues which gives rise to derangement of their functions, and a deviation from their normal organization. Hence, it is to the latter alone that our investigations must be almost exclusively confined. But, as the functions of an organized structure are merely vital acts performed by it, it must be evident that, whenever these acts become disordered, the structure itself upon which they depend, must, to a certain extent, have likewise become changed from its normal state, notwithstanding this change may not be detected by our senses; hence, it is perfectly correct to say that diseases are located in the tissues or organs by the disordered actions of which their phenomena are produced. M. Dubois appears to have been misled, when commenting upon the opinions of those pathologists who insist upon the local origin of all diseases, by supposing that when a disease is said to depend upon a lesion of one or more of the simple tissues, it is invariably meant that a perceptible change has occurred in the organization of the latter: with our author we fully admit that in all cases the anatomical lesion is the effect and not the cause of the disease.

In the greater number of cases, when disease is considered as it occurs in the simple textures, its immediate as well as remote phenomena may be very properly denominated vital actions performed abnormally, but not invariably, for all the symptoms of disease may, and very often do, depend simply upon the suspension or diminution of the actions of one or more organs. The assertion of M. Dubois, that there is no disease, excepting when the organism reacts, is alto-

gether erroneous, provided he employs the term reaction in its ordinary pathological sense. Many diseases are unattended throughout by reaction, and in many others so far from even the general symptoms depending upon a reaction of the organism, such reaction only occurs when the disease, properly speaking, is removed.

The author has carried his doctrine, that all diseases depend upon a vital reaction, so far, that in the case of tubercles of the lungs, for example, he will not admit that any disease exists, unless the tubercles have advanced to that state when they produce irritation or disorganization of the texture in which they are situated, together with an evident derangement of the functions of the respiratory organs. Carrying out this principle, he would, we presume, deny the existence of disease in the cases related by different writers, where, after death, extensive inflammation of important tissues was discovered, the presence of which had not been manifested during the life of the patient by any evident symptom. The existence of tubercles in any given tissue is an evidence not only of a modification of the organic functions of that tissue, but of a consequent change in its organization, often to a very considerable extent. By the general pathologist, therefore, they must be ranked among the indications of disease affecting that tissue.

The ensuing chapters of this section are devoted to the consideration of the general causes of disease. The opinions of the author, in relation to this subject are, upon the whole, extremely judicious, and such as we should feel no hesitation in adopting to their full extent. It is true that from his explanation of the mode of action of morbid agents, we occasionally dissent, in consequence of the different views we entertain as to the true character and primary seat of certain diseases. We likewise notice a few inaccuracies into which the author has fallen, evidently from the want of an attentive investigation of the points to which they refer. His remarks on hereditary affections, on specific causes, and on the sporadic, endemic, and epidemic forms of disease, evince, generally speaking, a sound and discriminating judgment. His views concerning contagion and infection, in particular, are extremely accurate.

The chapters which follow, comprise the symptoms of disease in general. This is a highly important subject, but one which we regret to say the author has treated in a manner altogether unadapted to a system of general pathology. The phenomena of disease are referrible, first, to the altered vitality and derangement of the organic functions of the tissues primarily affected; secondly, to the derangement of the functions of those organs of which the diseased

tissues form a component part, and thirdly, to the derangement of the functions of other tissues and organs, to which the disease has extended from the part where it commenced, or the normal actions of which are so intimately dependent upon the integrity of the latter, that a disturbance in the functions of the one, produces invariably a disturbance in the functions of the other. It is the first set of symptoms which demand the principal attention of the general pathologist. M. Dubois has, however, overlooked entirely this analysis of morbid phenomena; while his remarks, extremely vague in themselves, relate almost exclusively to those symptoms immediately dependent upon disease considered in reference to the different organs and apparatus. It is unquestionably true, that an attention to almost every particular referred to in the chapters under consideration, is of importance to the physician; what we complain of, is the little immediate connexion that exists between them and the main subject of the present treatise, the general pathology, namely, of disease.

The author very correctly remarks, "that, at the present day, the doctrines of pathology have brought medicine back to its legitimate object—the knowledge and treatment of diseases being at length based upon an investigation of the diseased organs." We, of course, should extend the term organ, as here employed, to every portion of the animal frame, including the simple tissues as well as the organs formed by their aggregation. "The symptoms," adds M. Dubois, "are nothing more than the phenomena connected with an abnormal state of the organism; phenomena, the occurrence, development, and succession of which are altogether dependent upon the morbid condition of the organs." It is to be regretted that the author had not always borne in mind these important truths—they have certainly had very little influence upon some at least of his pathological deductions.

His observations upon the occurrence, development, and progress of the symptoms, are in the highest degree interesting; they have, nevertheless, reference rather to the phenomena of disease considered as a series of abnormal actions resulting from a disturbance of the functions of the organs themselves, than to those morbid phenomena produced by an abnormal state of their component tissues.

"Medical writers," he remarks, "designate by the term *precursory symptoms*, or *forerunners of disease*, all the morbid phenomena which present themselves, from the moment when the functions of the organism are no longer executed as in a state of health, until the full development of the disease takes place. This mode of expression is an abuse of terms, as well as of things. What is that state which is no longer either health or disease? How is it possible to fix upon an interval, marked by peculiar phenomena, between the cessation of health and the commencement of disease? The real cause of this abuse of language is this:—

the presence of a certain number of symptoms is required for the establishment of our diagnosis; certain groups of morbid phenomena must occur, arranged in a particular manner, before we can say that a given disease is present. Now, so long as the symptoms are neither sufficiently intense nor significant in our estimation, we assert, with grave presumption, that, as yet, there is no disease; and yet, we admit, without embarrassing ourselves as to the logical consequences of our admission, that there is no longer a state of health.—Whenever, (he adds,) there occur prodromes, precursory symptoms, &c., there is disease. These are the general expressions by which we indicate its existence, until its phenomena have, in our estimation, become more definite, and thus enable us to determine its precise nosological character. But it is incorrect to say that disease has not yet occurred, while we admit that there is no longer a state of health."

The truth here insisted upon, that disease, namely, commences from the moment a derangement of any of the functions of the organism is perceived, is one of no trifling moment. The remarks of M. Dubois evidently relate, however, not to disease, as it exists in the simple tissues, but to those groups of symptoms to which the term disease is restricted by nosological writers.

What are generally denominated prodromes, or precursory symptoms, depend, in the larger number of cases, upon the occurrence of an abnormal state of some one of the simple textures, which, however, has not as yet produced any very serious disturbance in the functions of the organ of which the affected tissue forms a part, nor of those parts which more immediately sympathise with it. This is an important fact, and should be kept constantly in mind by the physician. A strict attention to it will enable him often, by a timely administration of appropriate remedies, to break the very first link in the chain of morbid causation, and thus prevent the occurrence of disease of a more serious and unmanageable character. It is in consequence of overlooking the real character of what are termed premonitory or precursory symptoms, and considering the disease to commence only when it has arrived at a certain degreee of intensity, and has extended its effects beyond the tissue in which it first occurred, and when usually the morbid condition of the latter is in a great measure obscured by the disturbance existing in the functions of several important organs, that much of the dispute in regard to the local origin of particular diseases, and the part at which they commence, has originated.

The two chapters on the development and progress of symptoms, are replete with judicious observations. These relate, however, to the phenomena of diseases affecting the functions of the principal organs and apparatus, and have but an indirect bearing upon those points more immediately demanding the attention of the general pathologist. The rapid or gradual development and progress of disease

in the simple textures—the nature and succession of the morbid phenomena thence resulting—their continuance, augmentation, remission and intermission, are almost entirely overlooked by the author, and yet they are subjects of very great interest and importance to the physician; correct views in regard to them being essential to a proper estimate of the same points in relation to the disturbances which affect the functions of the organs and apparatus.

In the chapters devoted to the general consideration of anatomical lesions, the author enters into a long argument, to prove, what we believe very few will deny, that, namely, the morbid changes which occur in the organization of the tissues do not constitute the disease, properly speaking, but are, on the contrary, produced by the latter. Under the term anatomical or organic lesion, it is proper, however, to remark, that M. Dubois includes not only those changes in the anatomical character of a tissue or organ, produced by an abnormal condition of the organic functions of the part, but likewise the immediate effects of injuries inflicted upon the tissues by external agents. Hence, he very properly remarks, that organic lesions, when taken in this extensive sense, "are sometimes the result of disease, and sometimes the cause, either eventual or real—either temporary or permanent, or finally indestructible, in that sense mortal, inasmuch as being incurable, they keep up continually a destructive reaction."

Confining ourselves strictly to the case of pathological lesions, or those which are actually produced by an abnormal state of the functions of the part in which they occur, it is well known that many of these also excite in their turn morbid phenomena, often of a more important character than those which existed previously to their occurrence, and hence may with propriety be classed, in a certain sense, among the causes of disease.

The author, however, has advanced the broad proposition, that the presence of anatomical lesions by no means implies the presence of disease, inasmuch as they may be unaccompanied by reaction of the organism. Although this would be strictly true to its fullest extent, were disease to be considered only as a certain series of abnormal actions, resulting from the derangement of the functions of the more important organs, it is nevertheless incorrect, excepting in a very restricted sense, when disease is considered as it presents itself in the simple tissues. Every pathologist must be aware that abnormal actions may exist in certain textures, often for a length of time, and may even produce a very considerable change in the anatomical condition of the parts affected, without any very sensible derangement taking place in the functions of the organs into which these textures

enter. It would not do, however, in such cases, to say that no disease exists, simply from the circumstance of the abnormal action and its effects being confined strictly to a structure capable of enduring very considerable injury, without exciting diseased actions in any other portion of the organism. As a general proposition, therefore, there is not a little error in the assertion of our author, "that numerous organic lesions may exist in the organs without the occurrence of disease, inasmuch as their presence is not invariably accompanied by (what he terms) the true elements of disease, the phenomena, namely, of either a general or local reaction."

Changes of organization do unquestionably occur as the effects of disease, and may remain after every symptom of the latter has disappeared. These changes come strictly under the denomination of organic lesions. They are, however, of a very peculiar character, as they do not interfere in any perceptible degree with the normal functions of the organ in which they are seated. But the term organic lesion, as the reader will hereafter discover, is employed by M. Dubois in its most comprehensive sense, and hence includes the local phenomena of inflammation, congestion, haemorrhages, &c.; indeed every perceptible change in the secretions, colour, thickness, density, &c., of a tissue. It is on this account that we object to the proposition last quoted. We repeat, what we have already more than once remarked, that in a system of general pathology our investigations are to be confined to disease as it occurs in the simple tissues, and not to those groups of symptoms which constitute the diseases of nosological writers.

To present to our readers a specimen of the author's reasoning on the subject of organic lesions, we translate the following paragraphs.

"Disease, we say, may exist, before the occurrence of alteration in the tissues. Is this equivalent to asserting that disease may exist at first, independent of the organs? By no means. I am aware that all pathologists who do not regard anatomical lesions as the true and only character of diseases, have been accused of giving countenance to such an assertion, but it is merely one of those absurdities that have been attributed gratuitously to the vitalists. When the latter assert that there is disease previously to the tissues being altered, they mean before those alterations which affect the material condition of the organs, their weight, density, colour, &c. But I have more than once remarked, that there exists in the living organism something besides these physical properties, for all these may continue unimpaired after the extinction of life. That from the moment disease occurs the organization is morbidly affected, there can be no doubt—the vitalists, themselves, acknowledge the fact. But the part of the organism which is interested at the commencement of the disease is of such a nature, that it escapes, and perhaps ever will escape, all our means of investigation. The latter can only inform us of the material changes formerly referred to; that is to say, of the changes in the cohesion of the tissues, in their form, texture, colour, weight, smell, taste, chemical composition, &c. Properties, no doubt, essential to the continuance of

life, but insufficient to constitute it. M. Broussais has, therefore, very correctly remarked, that every spontaneous disease is vital in its commencement. Its spontaneity proves that, under the influence of causes, for the most part obscure and almost unknown, the organization has been abnormally affected in some one of its elements, of which our senses can take no cognizance. Arm, if you please, your eyes with the most powerful microscopes, you will find nothing unusual in the form of the organic globules—nothing abnormal in their colour. Invent instruments of the utmost delicacy, to ascertain the difference in their weights, and the result will be the same. Disease, nevertheless, already exists; vices of organization have occurred, indicated solely by the group of symptoms they produce—vices not discoverable by any material phenomena, but rendered evident only by their phenomena. There is hence great truth in the observation of Broussais, that, to arrive at a correct knowledge of the pathology of internal diseases, it is necessary to pay the closest attention to the groups of symptoms, from the moment of their occurrence, in order that we may appreciate their just value. This precept is not only strictly true, logically speaking, but it is also true in a therapeutical point of view; of this the explanation of the author just referred to may be adduced in evidence. The cure of diseases, he remarks, is effected with more difficulty after the structure of the organs is altered, than when that structure is yet intact. In consequence of the use of this latter term, some degree of absurdity may perhaps be attributed to Broussais, as well as to myself, by whom the above proposition is adopted in its fullest extent. It may be said that we admit the existence of disease with an organic structure intact, in every sense of the word; which would be equivalent to asserting that an individual may be sick while his entire organism is in perfect health. By organic structure, should be understood the material condition of a part as revealed to our senses, such as the disposition of its fibres, the organization of its vascular and nervous textures—its colour, form, consistency, degree of congestion, &c. Now, all these conditions may be intact in a portion of the economy, and yet this part may be the seat of disease; and the part so diseased may be the point from which originate morbid phenomena affecting the entire organism; the latter, nevertheless, remaining still in a similar state of physical integrity. This is sufficient, I conceive, to explain what is meant by organic structure; besides, this expression, applied to the animal system, has in itself a very limited signification. It indicates merely the general conditions of edification, if I may be allowed such a term, but nothing of what relates to animation."

All this reasoning, however correct in itself, does not prove that organic lesions may exist without disease being present—nor that a mere change in the dynamic condition of a tissue or organ, independent of all organic lesion, is the sole cause of morbid phenomena. Let it be recollected also, that, notwithstanding the admission made by M. Dubois in the above quotation, that all diseases are dependent upon a morbid change in the vitality of one or more organs, he at the same time denies that any disease can be localized—The change from the normal condition of the organs does not, with him, constitute disease, properly speaking; this consists solely in the abnormal state of the functions, to which the former gives rise.

The organic lesions are divided by our author into congenital vices

of conformation and accidental or acquired lesions. The first are referred to a derangement of what he denominates, after the German physiologists, the *formative force or power*—a power which is supposed “to exist in the homogeneous mass constituting the ovum, and by the agency of which all the elements of organization are produced in it, appropriated, harmonized, and, in a word, submitted to the laws of formation.” This power may possess either an excess or deficiency of energy, or its action may be perverted; and hence there may take place, in the first place, an excess or superabundance of development in the organs of the foetus; or there may occur an arrest of development in certain organs; or, finally, “the organs may not have the requisite harmony of relation, their respective constitutions may be vicious, and their relative positions may be changed.”

In considering the accidental or acquired lesions, the author first notices the alterations in the composition of the blood—then the modifications which it experiences in the course of its circulation, from derangements of the impulsive force, or from causes altogether physical. This includes the different congestions and *stagnations* of the blood. Next in order, he examines how far the several abnormal secretions are referrible to a disordered action of the eliminative force, or that force by which the materials of the secretions are separated from the mass of the fluids. Finally, the lesions of nutrition occupy his attention, all of which are referred to a morbid action of the plastic force.

That in most, if not in all, the abnormal states of the tissues, their capillary circulation, their secretions, and, perhaps, their nutrition, are more or less altered, is an important pathological fact. We cannot perceive, however, that our acquaintance with the nature and immediate causes of these alterations of function, is in the slightest degree augmented by attributing them to certain hypothetical forces. It is the character and extent of the different modifications which take place in the organic actions and conditions of the affected tissues, the particular circumstances under which they occur, and the various morbid phenomena to which they directly or indirectly give rise, that interest chiefly the pathologist. We regret to say that, upon all these particulars, the information detailed in the work before us is particularly meagre and unsatisfactory. While we are presented with many just and pertinent remarks, the author has failed, in general, to seize upon and present in bold relief, the leading pathological data and deductions connected with this part of the subject.

It is impossible to follow M. Dubois in his investigation of the several species of organic lesions, agreeably to the classification he

has adopted. To attempt an examination of the opinions which he has advanced in reference to this subject, would extend the present review to an unreasonable length. Although he admits that many of the organic lesions are preceded by congestions, or even by a certain degree of inflammation, yet he denies that this is ordinarily the case. From the doctrine which attributes them generally to different grades of irritation affecting the tissues in which they are seated, he entirely dissents, as one insufficient to explain their production, and inconsistent with facts. Occasionally, it is true, his objections have some weight; but at the same time it must be admitted that he has failed, generally speaking, in establishing them by sound pathological arguments—while the manner in which he has attempted to account for some at least of the morbid changes in the tissues, is far less satisfactory than the doctrine which he rejects.

The first section of the work closes with a view of the necroscopic investigation of anatomical lesions, and of the leading therapeutical indications, or general mode of treating diseases; in which latter is contained a series of highly judicious observations, the result evidently of extensive experience and much reflection.

The manner in which the subjects embraced in this section are treated, prove the author to be emphatically a vitalist. All the phenomena of disease are, according to him, vital actions abnormally executed—all changes from the normal state of the tissues and organs are the result of a derangement of the organic functions. Thus far we should be inclined to subscribe to his opinions, without much hesitation; but in carrying out these general views, he may very properly be accused of ultra vitalism. Vital or functional derangements are so generally spoken of as being distinct from organic derangements, that the real seat of the disease in the organs is entirely lost sight of, or, more correctly speaking, denied—a most pernicious error in reference to its effects upon our diagnosis and therapeutical indications. Vitality and organization, function and organ, are so intimately connected, that it is impossible to separate them in our pathological reasoning. All those systems which lead to such a separation, so far from advancing our acquaintance with the character of diseases and facilitating their cure, have produced directly contrary effects.

The second section of the treatise is devoted to a consideration of those "diseases which may affect many systems of the economy." The diseases arranged under this head form rather a strange medley, more particularly when we consider that the work before us professes to be exclusively devoted to general pathology. The maladies capable of affecting several systems, are, according to M. Dubois, inflamma-

tion, suppuration, wounds, ulcers, gangrene, burns, congelation, fever, poisoning, asphyxia, cachexia, and the verminous affections generally.

The author declines presenting any formal definition of inflammation. He prefers "rather, after the manner of the celebrated Hunter, to investigate with attention the various symptoms which it produces in its effects upon the different tissues and organs. So far, however, as it concerns the derangement of function caused by it in the latter, its investigation is the province of special anatomy. It is the consideration of inflammation in reference to the tissues alone which enters into the plan of the present work. Of what advantage is it," inquires the author, "to repeat continually, that in every inflammation nature reacts, if we are ignorant of the manner in which she reacts, and while there are as many modes of reaction as there are different tissues in the organism?" This is all extremely just, and in strict accordance with the principles of general pathology.

The remarks of M. Dubois upon the general causes of inflammation present nothing which calls for any particular remark, excepting one or two allusions to specific inflammation. We doubt very much whether it can ever be established by conclusive arguments, that, aside from those differences in the phenomena, progress and effects of inflammation derived from its occurrence in a particular tissue, or from its being associated with a diseased condition of particular organs, there is any thing strictly specific in the nature of any of its varieties. We deny, without hesitation, that, properly speaking, there exists a scrofulous, gouty, or rheumatic inflammation. The cultivation of general pathology has reduced the number of specific diseases to a very few, and we have little doubt that hereafter we shall discover, in the peculiar organization or vitality of the parts affected, the cause of the peculiarity of phenomena by which most of the remainder are characterized.

The chapters on the causes and symptoms of inflammation in general, present a tolerably full and correct digest of the leading facts connected with these points. In relation to the febrile symptoms by which inflammation, when of a certain degree of intensity, is almost invariably accompanied—the author, after stating the importance of determining with accuracy what are the febrile symptoms which are produced by local inflammation, that is to say, what are the symptoms of inflammation, properly speaking; and, secondly, what are the symptoms which are primitively febrile, or, in other words, immediately excited by the influence of the morbid causes by which we are surrounded; remarks as follows:

"We acknowledge that it is much more easy to recognise the existence of the first than of the second variety of febrile symptoms. We know that local inflammations, when of a certain degree of intensity, give rise consecutively and symptomatically to phenomena of a general or constitutional character—in a word, to fever. We acknowledge, further, that pathologists formerly neglected, almost invariably, to investigate the morbid condition of the individual organs by which these symptoms are produced, and that they frequently described as primitive fevers, those which are actually symptomatic of local inflammations. It is from this circumstance we are to explain why, formerly, fevers were so numerous, while the occurrence of gastritis and enteritis was, or rather appeared to be, so rare. It is to Broussais, especially, that the honour is due of having directed the attention of physicians to this branch of pathology, by which he has rendered a real service to humanity.

"The closest attention and most minute investigation are frequently necessary to determine the local disease. This arises, no doubt, from the diversity of the functions assigned to the different organs. It is rare that an inflammation affecting an organ whose functions are those of relation, and of sufficient intensity to produce general symptoms, will escape detection, excepting when the brain or its dependencies is at the same time labouring under disease. Such is not the case, however, when the inflammation occurs in a part the functions of which are those exclusively of organic life—frequently an inflammation thus seated remains obscure during its entire course, and it may even be masked by the febrile phenomena which it has itself provoked. The existence of the local disease is in fact often overlooked, until revealed by an autopsical examination after the death of the patient. It should not, however, be supposed, that in every case the inflammations observed after death have been the point of departure of the febrile symptoms. The latter may have preceded the local disease; they may even have played a part in its production.

"By the influence of atmospherical vicissitudes, or of those unknown causes which constitute, in a majority of instances, the medical constitution; or by the influence of causes altogether moral, the entire organism may be primarily modified, so as to produce a febrile reaction; for all its parts are so connected, that nothing is more natural than a general perturbation. The organism, when morbidly affected in its nervous centres, is soon functionally affected in the central organ of the circulation, and in this manner all the phenomena of fever are produced."

While we object strongly to the looseness of phraseology evinced in the foregoing sentences, particularly the last, we have no objection to admit to their fullest extent, the legitimate inferences deducible from the positions set forth in them. That those phenomena, strictly denominated febrile, very generally accompany local inflammations of any degree of intensity, is so well established a fact that no pathologist of reputation has ever disputed it. That, also, what have been denominated primitive or idiopathic fevers, depend very generally upon a local inflammation, notwithstanding the existence of the latter is so frequently overlooked, is a fact that can be established likewise beyond the possibility of dispute. It is equally true, that certain causes acting directly upon the nervous system, and through

it upon the heart, may produce all the phenomena of fever; and if this is what the author means, by "the entire organism being modified," and by "a general perturbation," we admit the correctness of his observation, but not of the terms in which it is expressed. The excitement here alluded to, however decided may be the fever produced by it, will very soon subside, together with its effects, unless some portion of the nervous system, or of some one of the other tissues, becomes the actual seat of irritation, or of well marked inflammation. Hence, we assume it as a pathological axiom, that every fever, properly so called, if not produced, is, at least, kept up by the presence of local disease. We care not whether this be an irritation seated in the nervous centre; an inflammation of the pleura, lungs, stomach, peritoneum, or any other part.

The author's views as to the nature of what he terms primitive or essential fever, differ very materially from those which we entertain.

"It has been for a long time believed," he remarks, "and many pathologists still suppose, that the general symptoms excited by inflammation, are identically the same as the phenomena of primitive fevers; that there is no difference between these excepting in the parts primarily affected, or rather in their mode of production. The first depending upon a local inflammation, while the second are immediately excited in the organism by general causes. This position, when carried out to its full extent, is evidently erroneous. Without doubt, there is considerable analogy between the symptoms peculiar to that form of primitive fever, denominated inflammatory, and those of traumatic fever; but the analogy goes no further. We are not to suppose that the febrile symptoms, produced by a decided local phlegmasia, can assume the *typhoid* form, and still remain the symptoms of simple inflammation. Whatever may have been the origin of the febrile phenomena, whether they have or have not been produced primitively by inflammation of some organ, the moment the fever assumes the typhoid form, other elements enter into this new morbid condition than that of inflammation. We must admit, it is true, that a typhoid fever may, in certain cases, commence with the symptoms of an inflammatory reaction. We cannot deny, that in other instances, a local inflammation may have produced the primary symptoms, and that on opening the bodies of patients who have died in the course of a typhoid fever, evident traces of inflammation in the organs may be detected. But what do these facts prove? Do they prove that the phenomena of inflammation are alone sufficient to constitute a typhoid fever? By no means. They merely prove that in subjects predisposed, a severe local inflammation may give rise to a condition of things very favourable to the occurrence of fever of a typhoid character—that such subjects, when labouring under an inflammation sufficiently intense to excite febrile symptoms, may esteem themselves very fortunate should they experience no attack of this form of fever; and finally, that the presence of the latter does not necessarily imply that no visceral inflammation exists. No one asserts that in typhoid fever there is no inflammation; the coincidence of the latter has been admitted; it has even been acknowledged that it may have an agency in the production of the typhoid phenomena; but it has been maintained, and very cor-

rectly, that the production of these phenomena cannot be referred solely to the existence of such inflammatory lesions."

The important pathological question, in regard to the nature of fever, which has of late years been so extensively discussed, is very incorrectly stated in the foregoing sentence. So far as we are aware, no one has ever advanced the opinion that the prominent symptoms of all those diseases, ranged by nosologists under the head of idiopathic fevers, are dependent upon a mere increased excitement of the general circulatory system, caused by a local inflammation. It is acknowledged on all hands, that in the diseases referred to, there occur other morbid phenomena than acceleration of the pulse, increased heat of the surface, and a hurried respiration. The fact is, the term fever, which ought to be confined strictly to designate the latter phenomena, has been applied by medical writers to designate a series of very complex symptoms, of which the febrile excitement forms often the least important part. The real point in dispute is, whether the affections, known by the name of idiopathic fevers, depend upon some mysterious modification of the entire organism, unconnected with local disease, or whether all the phenomena by which they are characterized, may not be traced to a diseased state of one or other of the tissues entering into the composition of certain organs. This latter doctrine is maintained by the physiological school of pathologists—and the facts and arguments in its support, are, in our opinion, conclusive. We do not propose here to enter into an investigation of the phenomena which characterize those fevers the author has referred to, under the denomination typhoid; phenomena, upon the true character of which, however, scarcely two pathologists can be found to agree; yet we may remark, that the very fact, admitted by M. Dubois, that these phenomena may, and we may add, very often do occur, in connexion with the general febrile excitement produced by local inflammations, is sufficient evidence that there is nothing specific in the typhoid phenomena; but that they are capable of being excited at least indirectly by the inflammation of a single tissue, when this is sufficiently intense to produce disease and consequent disturbance in the functions of the more important organs of the system. That local inflammations of the most intense grade do often occur, without giving rise to typhoid symptoms, is no evidence that the latter are independent of the local disease—all the phenomena of inflammations are modified, not only by the different tissues and organs in which the latter occurs, its greater or less degree of intensity, &c., but also by the predisposition to disease of different parts of the organism. In investigating the pathology of such complex diseases, as are many of

the fevers of the nosologists, these facts should be kept constantly in mind. We very often forget that from a variety of circumstances, of the nature of many of which we are still ignorant, organs not primarily affected, may, in the course of the disease, become the seat of morbid action, and consequently, that, in its different stages, it may present very dissimilar phenomena; the whole of which are, nevertheless, strictly speaking, a series of morbid results, dependent primarily upon a local inflammation of very limited extent.

The author's remarks upon the *sthenic*, *asthenic* and *mixed* forms attributed in different cases to the febrile symptoms produced by local inflammation, are in entire accordance with our own views.

"Whenever very decided febrile symptoms occur—in other words, a full and frequent pulse, accelerated respiration, considerable heat of the surface, great thirst, flushed countenance, brilliant appearance of the eyes, &c.; these phenomena are attributed to an exuberance of strength, and the form of the fever is said to be decidedly sthenic. But to constitute the asthenic form, has a directly opposite condition been demanded? that is, a feeble and slow pulse, diminished frequency of respiration, and coldness, more or less intense, of the surface. No—for it was perceived that these phenomena might, it is true, indicate asthenia, but not fever. It is not, in fact, an asthenic condition that has been sought for, but a condition of things different from that set down as sthenic; which has in some degree given support to the opinions of those who deny altogether the notions of asthenia. Thus a fever characterized by a frequent, small and contracted pulse, black tongue, inanimate countenance, subsultus tendinum, &c. has been described as asthenic. This sufficiently proves that we cannot attribute to inflammation the property of exciting febrile phenomena, of which the form is sometimes sthenic, and at others asthenic. With respect to the form denominated mixed, we remark in the first place, that even admitting the explanations of those who contend for its existence, it is not, in truth, mixed, for a mixed form, relatively to the sthenic and asthenic, would be actually the normal or healthy condition. The person who is neither too strong nor too weak, whose pulse is neither too quick nor too slow, whose respiration is neither too frequent nor too infrequent, is, in fact, in perfect health. But the mixed form of fever has been differently described. It has been said, that in these cases the first period of the fever is inflammatory and sthenic, while the last is typhoid, or asthenic. In reply to this assertion, we assert that here there are two distinct periods, or rather two successive diseases."

In regard to what are usually enumerated by pathologists as the *terminations* of inflammation, for example, adhesion, suppuration, ulceration, effusion, gangrene, &c., M. Dubois very properly remarks, that in the majority of cases, it is not true that the inflammatory action ceases upon the occurrence of the above phenomena; many of them are, in fact, intimately connected with the presence of a certain grade of inflammation. In place, therefore, of being ranked among the terminations of the latter, they should be considered as distinct morbid conditions, occurring in parts which are the seat of inflamma-

tion, and produced by the latter. The only real termination of the inflammatory process, according to our author, is in resolution.

In the chapter devoted to the consideration of the act of suppuration, we are furnished with a very correct description of its leading phenomena, interspersed with numerous remarks, which, though possessed of little novelty, are, in general, sound, and of a practical bearing. With M. Louis the author would seem to consider the production of pus so distinctive a feature of inflammation, properly speaking, as to deny the inflammatory character to all diseases in which it does not occur. He has, in so doing, overlooked entirely the modifications in the phenomena, as well as in the progress and effects of inflammation which result from the difference in the structure and vitality of the tissues in which it occurs. It affords a strange comment upon the views of M. Dubois, just alluded to, when we find him subsequently, more than once, adverting to the pathological fact pointed out by Bichat, that in inflammations of the fibrous tissue suppuration never occurs.

If our space would admit of it, we should be inclined to enter into an examination of the hypothesis, adopted by our author from the older pathologists, that hectic fever is in every instance produced by the absorption of pus. We are persuaded this hypothesis will not be found to be very clearly established, when an investigation is made of all the circumstances under which the occurrence of hectic fever takes place. We believe it will be discovered, that in certain instances the presence of well defined hectic fever is unconnected with any evidence whatever of the existence, much less of the absorption, of purulent matter.

The remarks of the author in relation to wounds, ulcers, gangrene, &c., are, with few exceptions, in accordance with the opinions of the most recent and authoritative observers.

M. Dubois proceeds next to the consideration of fevers in general. It is not our intention to enter into a detailed examination of the doctrines advanced by him in relation to this highly important but very debateable subject. We have already noticed cursorily the author's views of the pathology of this class, as it is termed, of diseases. Admitting, with the majority of modern pathologists, that a large number, at least, of febrile diseases are dependent for their production and continuance upon local inflammation, more or less extensive, and of different degrees of intensity, he nevertheless still maintains that there are fevers of a particular character, which are altogether independent of local disease, and which consist in a general reaction of the organism, produced by causes which act directly upon the ner-

vous centres and the heart. The correctness of this hypothesis, the author has attempted to establish by an examination of the causes, phenomena, progress, and anatomical lesions of simple continued, intermittent, typhoid, yellow, and the other fevers described by systematic writers. How far the phenomena, connected with these, justify the general conclusions adopted by M. Dubois, as to the existence, character and mode of production of idiopathic fevers, must be left to the reader to decide, after an attentive perusal of the author's arguments. So far as our own opinion is concerned, we have no hesitation to say, that notwithstanding the dogmatic and often exulting tone which the author has assumed in this portion of his treatise, we are under the necessity of calling in question the correctness of much that he has advanced as facts, and to deny the legitimacy of many of his conclusions, even admitting the accuracy of his premises. That a fever of any duration can exist without the presence of local disease, we absolutely deny. We have already observed, that the fevers of nosological writers are not to be viewed as simple, but as very complex diseases—often, indeed, they may, with some degree of propriety, be said to consist in a succession of diseases of very dissimilar character. The only manner in which their pathology can be investigated with any hope of a profitable result, is by carefully noting from the very onset of the malady until its termination, the different organs that are morbidly affected, the order in which they become attacked, the nature, extent and progress of the disease in each, and the modifications produced in the general phenomena by the transmitting or extension of the local disease from one portion of the organism to another.

The ensuing chapters treat of the different species of poisoning and of asphyxia. Upon the latter, the observations of M. Dubois are particularly interesting, and deserving of an attentive perusal.

The next subject treated of is that class of diseases which the author denominates cachexies. These he describes as affecting at their commencement, and, for the most part, consecutively, "several systems of the animal economy."

"In these every thing is *material*, all is a result or effect; it is not, therefore, to a series of morbid actions that our investigations are to be principally directed, but rather to the abnormal condition of the parts affected. Thus the cachexies do not in reality constitute, of themselves, diseases; it is only when they excite reaction that they really acquire this character."—"In modern times, the denomination cachexy has, by some, been attempted to be restricted to that period of disease when the infection has become general; when the alteration of the tissues is, to a certain extent, universal. Thus, according to Bayle, to constitute a cancerous cachexy, it is necessary that the cancer, having arrived at a certain grade, should occasion, in the vital properties, in the constitution, and in the func-

tions, a derangement, giving rise to a particular alteration in the colour of the skin, to emaciation, general debility, sometimes hectic fever, &c. Others have confined the term cachexy to those cases in which there exists a vitiation of the fluids, producing infection throughout the system. By us the term is used in a more extensive sense. We by no means deny that in cachexy the fluids participate in the morbid condition of the economy. These affections favour more than any others the humoral doctrines; the exclusive vitalists have never been able to explain their phenomena in a satisfactory manner. We do not conceive it to be necessary, however, that the vitiated condition of the nutritive process should have arrived at its final stage in order to constitute a cachexy; it is sufficient that there exists a tendency to a depraved nutrition and to a vitiation of the fluids."

"We conceive that the word cachexy should be employed to designate, in a general sense, that condition of the animal economy in which the general functions, and particularly the nutritive, are deranged, in consequence of a special vice, whether the latter consists in an abnormal condition of the fluid, or results, primarily, from some morbid cause acting upon the vital forces, and especially those which preside over the nutritive and secretory processes."

According to the author, there are four diseases in which this condition is very fully evinced; namely, syphilis, scurvy, scrofula and cancer. These affections consist in a vitiation of the fluids, and a disorganization or rather a morbid alteration of the organic elements of the tissues of the body, involving finally every portion of the organism. This change in the condition of the tissues does not, however, if we understand the author correctly, constitute, properly speaking, disease, until, either in consequence of the progressive disorganization of the parts affected, or of the reaction produced in the neighbouring or remote organs, the functions of these or of the organism generally, become deranged.

But, it may be asked, where are we to look for the first link in the chain of morbid causation giving rise to this vitiation of the fluids and morbid nutrition of a single or several portions of the body?—Does it depend upon derangement of the digestive function, upon imperfect chylification, or upon defective haematosis? If so, how does it happen that all the parts of the body are not affected simultaneously, or in rapid succession, instead of the disease, as is the case in some at least of the cachexies of our author, remaining confined, often for a very considerable period, or even during their whole course, to a single tissue or organ, and continuing for months, perhaps years, in apparently a quiescent state? In place, therefore, of referring the vitiation of nutrition to a general cause, should we not seek for it rather in some local cause, disturbing the organic functions of the parts successively affected? Finally, if all the cachexies depend upon one general cause, in what manner are we to account for the striking dissimilarity in their phenomena; is this owing to their occurring in different tissues, or to the nutrition being vitiated in a different manner in each; and, if so,

in what manner is this difference to be accounted for? An abstract of the author's views in relation to the individual cachexies will show how far he has attempted to solve these important queries.

Syphilis, which he places at the head of the list, is the result, we are told, of a specific animal poison, introduced into the system, and which invariably produces the same identical series of lesions in the tissues with which it is in contact. Its first effects being to excite a specific irritation, by which the secretions of the part affected are caused to assume the same specific properties with the poison itself. This morbid condition of the solids and fluids, gradually extends itself, by the absorption, we presume, of the secreted poison, throughout the whole organism, unless it be arrested by a specific plan of treatment.

Without entering into any dispute as to the specific or non-specific character of the irritation produced by the venereal virus, it is evident, from the author's own admission, that its immediate effects are, strictly speaking, local. And any one who will take the trouble carefully to analyze the symptoms and watch the progress of the disease, will, we are persuaded, be convinced, that the changes which take place in the organic condition, together with the altered secretions of the parts affected, are the result of inflammation, and that the propagation of the disease to different and remote tissues, is effected in the same manner as the propagation of other inflammations, and not by the derangement of the general nutrition of the system, and the vitiation of the entire mass of the fluids.

The causes, symptoms and progress of scurvy, afford a more striking illustration of the general views of the author in relation to the pathology of cachetic diseases than either of the others which he has referred to this class. Produced by a defective diet, a damp, stagnant, and vitiated state of the atmosphere, confinement, and the influence of the depressing passions generally; presenting as its prominent and characteristic symptoms an altered state of the blood and other fluids, and apparently a tendency to dissolution in the solids; a derangement of the nutritive process throughout the entire organism, would very naturally suggest itself as the most plausible explanation of its pathology. And yet, there are very formidable difficulties attending this mode of explanation. The rapidity with which the more serious symptoms of scurvy disappear upon the administration of a few drachms of vegetable acid, after placing the patient upon an improved diet and exposing him to the influence of a dry and pure atmosphere, can scarcely be accounted for by presuming that under the influence of these agents the nutrition of the whole body has become completely changed, and the solids and fluids entirely renewed.

The scrofulous cachexy, as M. Dubois terms it, in which he affirms after Baudelocque, that every portion of the body is composed of elements of a vitiated character; that the whole edifice is constructed of bad materials, results from the action, we are told, of nearly the same external causes as scurvy; residence, namely, in situations where the air is surcharged with humidity, and not sufficiently ventilated; which are, to a very considerable extent, excluded from the influence of the solar rays; deficiency of wholesome food, and too little bodily exercise. These morbid causes in place, however, of producing the same organic changes as those which take place in scurvy, cause a special or specific depravation of the nutritive process, indicated by phenomena of a very distinct character.

"Before, however, any serious disorder occurs in the tissues of the organs, there is developed a peculiar constitution, denominated scrofulous; the nutrition not being yet sufficiently depraved to produce real organic lesions, but it is, nevertheless, so changed as to give rise to a special temperament, in which every thing indicates an organic predisposition to the disease."—"The persistence of the same external causes, by modifying, more and more, the composition of the solids and fluids, renders their condition incompatible with health, and scrofula is finally developed. We see all the tissues become successively diseased; all the secretions become more and more changed, until the morbid state of the organs gradually augmenting, terminates finally in their complete destruction, and in death."

According to M. Dubois, scrofula commences in a vitiation of the fluids, the solids being affected secondarily. But he has not even attempted to prove that such vitiation of the fluids exists; that, according to the definition of M. Baudelocque, in any one instance there occurs a vitiated nutrition of all the tissues of the body; while every physician is aware that, in numerous cases, the disease is confined to a single gland, or to the tissues of a single organ. Neither has he attempted to explain why, if scrofula commences in a defective haematosis and consequent morbid change in the fluids, it should develop itself almost exclusively in certain organs, leaving others perfectly intact. The doctrine of a specific vitiation of the nutritive process, however convenient a resort for the solution of the above and other difficulties, cannot be admitted as satisfactory, until we are placed in possession of the facts by which the existence of such specific vitiation is clearly established. Without entering into an examination of the true pathology of scrofulous diseases, we may be permitted to say that, in our opinion, the author has not succeeded in establishing the correctness of the views which he has advanced. He has indulged very fully in hypothesis, but there is a want, in the whole of his remarks upon the disease, of that close analysis of symptoms, and a comparison of these

with the morbid changes going on in the tissues which we had a right to expect in a work on general pathology.

In reference to cancer, which is the last of the diseases included among the cachexies, we are told, that exposure to a cold, humid, and stagnant atmosphere, the use of unwholesome food, want of sufficient exercise and the indulgence of the depressing passions, produce, in persons of a certain age, and especially females, by their morbid influence upon the nutritive process, a specific morbid condition of the solids and fluids which constitutes the cancerous cachexy; and which, though differing in certain important particulars from the scrofulous cachexy, has yet many points of resemblance with the latter, as well from the similarity of its causes, as from the fact, that persons attacked with cancer have, during infancy, been almost invariably affected with scrofula.

The local phenomena which manifest themselves in cancerous subjects are, our author admits, very generally developed in consequence of some violence inflicted upon the part. The effect of this violence being ordinarily an irritation, is the reason, he conceives, why so many pathologists have fallen into the error of considering the cancerous affection to be, if not one of the forms, at least one of the terminations of inflammation. He, however, remarks that—

"The principal and true causes of the cancerous cachexy act upon the organism generally, and are debilitating rather than stimulant in their effects; that the local or occasional causes do not act in virtue of an irritating property, but only because they produce a morbid condition of some tissue predisposed to disease. If the system had not already been reduced to a cachetic state, these occasional causes would be productive of no effect, or at least their effect would be merely the production of a simple inflammation and nothing further."

Notwithstanding the positive manner in which M. Dubois lays down as unquestionably true, this explanation of the pathology of cancer—we seek in vain for a detail of the facts by which its correctness is established, or any attempt to prove its validity by an analysis of the phenomena exhibited in the course of the disease, and a close investigation of the physical and organic changes occurring in the affected tissues from its commencement until its termination.

Four morbid affections occurring in certain parts of the organism are referred to very nearly the same remote or external causes. All are presumed to consist essentially in a vitiation of the fluids, and an abnormal state of the nutritive process throughout the body; and although differing essentially in their symptoms, progress and results, we have no other explanation afforded us of this dissimilarity than a presumed specific difference in the abnormal states of nutrition upon which they respectively depend. If these are to be received as ra-

tional views of pathology and such as are adapted to improve the practical branches of our profession, we confess that we shall be under the necessity of studying the science anew, and deriving our conclusions from data other than those upon which we have heretofore depended.

A chapter on verminose affections terminates the second section of the treatise. The third section comprises the diseases of particular tissues. In this a nearer approach is made to what we conceive to be the legitimate subjects and proper arrangement of a system of general pathology, than is displayed in either of the preceding sections. The manner, nevertheless, in which the author has thought proper to treat of the affections of the individual tissues is, we conceive, in many particulars decidedly vicious.

The different pathological states of the cellular tissue are those first treated of. The chapters on phlegmon, phlegmonous inflammation, and abscess, call for no particular remarks. Those on œdema and anasarca are, however, highly interesting. The author's views in regard to the nature of these affections correspond with the observations of the most authoritative of the modern pathologists.

The active or acute form of serous infiltration of the cellular tissue, whether local or general, is referred invariably to a simple inflammatory condition of the tissue, the immediate effect of which condition is such an augmentation of the secretion of fluid into its cells, as to prevent the absorbents removing it with sufficient rapidity. The passive or chronic form of the disease results most commonly, in the opinion of M. Dubois, from the existence of some impediment to the free return of the blood by the veins, or to the transmission of the lymph through its proper vessels, which gives rise to a marked diminution, if not a total interruption of the absorption of the serous fluid secreted within the cellular tissue.

On induration of the cellular tissue in new-born infants, the author has presented some very excellent remarks. He denies, however, that this peculiar affection is ever dependent upon a sub-inflammation of the tissue or of the lymphatic vessels. He attributes it invariably to an imperfect haematoses and a consequent increased plasticity of the serous fluids.

"These fluids, in fact, preserve, even after death, such a tendency to coagulation, that, according to M. Rochoux, they become moulded into cylinders by the vessels in which they are contained. M. Chevreul has submitted the serum of the blood of infants affected with this disease to a very accurate analysis, and has found it to contain a very large proportion of a yellowish green colouring matter. The cellular tissue is in every instance dense and engorged with fluids, which have so strong a tendency to become concrete, as to escape with difficulty when

incisions are made into the tissue. Sometimes, however, the latter is found distended by a serous fluid to a very considerable extent, while in other cases the tissue is dry and lardaceous. The viscera, likewise, present peculiar alterations. It has been observed that the whole of the nervous system is engorged with blood, as well as the parenchyma of the lungs, especially at the most depending portions of the latter. Every thing, indeed, indicates, that during the lifetime of the patient there existed a languid circulation of the blood throughout every portion of the body. There is a stagnation of blood in the veins, the right cavities of the heart are enormously distended, the foramen ovale frequently remains open. The hepatic system is equally the seat of a stasis of blood; but the tissues of the liver are unchanged. M. Rochoux thinks, without, however, giving the reasons upon which his opinion is founded, that the lining membrane of the gall bladder and of the hepatic ducts, is constantly the seat of a species of inflammatory affection. The spleen, as might be supposed, contains a large amount of blood."

As the induration of the cellular tissue of new-born infants is a disease as yet but little understood, we have presented the foregoing account of the lesions discovered after death—convinced that it cannot fail to be interesting to our readers. How far the opinions of M. Dubois, in regard to the pathology of this affection correspond with facts, must be left to future and more extensive observations.

Passing over the remaining affections of the cellular tissue, we come next to those of the nervous system. The author treats first of inflammation of the central portions of the latter. His remarks upon this subject are upon the whole extremely correct, but of far too general a character. The causes, phenomena, and effects of the inflammatory conditions of the brain and spinal marrow are merely alluded to, while nearly all the important details connected with the subject, and essential to a proper understanding of it, are omitted. The same remarks are also true in regard to the succeeding chapter, which treats of inflammation of the nerves; M. Dubois, however, presents us with an interesting sketch of the anatomical lesions consequent upon neuritis.

The following are given by the author as the distinctive phenomena of neuralgia and neuritis.

"In neuralgia the pain occurs suddenly and frequently is of such intensity as to be scarcely endurable. It subsides as suddenly, but continues to recur, after a longer or shorter interval, with a most provoking obstinacy. The pain in neuralgia is unattended by either swelling of the part or any very decided redness; it is often relieved by pressure, and, besides, is of a very peculiar and decided character. Sometimes it resembles an electric shock, a burning heat shooting, as it were, through the affected parts; in other cases, it consists simply in a sense of formication, or in a most intolerable burning. The pain commences at a point and follows the minute ramifications of the diseased nerve. Neuritis, on the contrary, is developed gradually, like other inflammations; the pain is continued and seated along the course of a large nervous trunk; it is augmented by the motions of the part, and is accompanied by some degree of swelling and increased

heat. Finally, symptoms of a general reaction, indicated by augmented quickness and frequency of the pulse, heat of surface, thirst, &c. become developed as soon as the local disease acquires a certain degree of intensity. Frequently, however, it is somewhat difficult to distinguish simple neuralgia from inflammation of the nerve by the symptoms alone; in neuritis the tumefaction of the part is not always appreciable, while in *neuralgia* (the author has it *neuritis*) pressure is often productive of extreme pain; but one circumstance should always be borne in mind when making up our diagnosis, which is, that inflammation almost always attacks the sciatic nerve, seldom the median or cubital, (Martinet,) while neuralgia attacks more frequently the branches of the trigeminal nerve. Besides, when the latter does affect the sciatic nerve, it is invariably intermittent; sciatic neuritis, on the contrary, is continued, while the pain is exasperated by the act of walking; the extremity often acquires a livid hue, its veins are swollen, and finally it becomes atrophied."

The chapter on softening of the central portions of the nervous system is altogether unsatisfactory, so far, at least, as relates to the pathology of this affection. The author admits, that, in many instances, the softening is consequent upon an inflammation of the nervous matter; but, in other cases, he asserts, that it occurs under circumstances altogether opposed to the existence of inflammation, and without ossification of the nutrient vessels of the part. Instead of a stimulation, there is rather, he observes, a debilitation of the tissue, as in the case of white softening, with discoloration or atrophy of the brain, &c. In other cases the softening would appear to him to be owing, in some degree, at least, to the solvent action of effused fluids, and finally, in certain cases, it is to be viewed, he maintains, merely as a cadaveric phenomenon. This may be all very true; the author, however, has produced no fact in its support.

The author's remarks on induration of the central portions of the nervous system, though extremely brief and of a very general character, are much more interesting and satisfactory than those on the preceding affection. Admitting, as he could not well avoid, from the numerous facts accumulated by the industry of recent observers, all of which go to establish the fact, that induration of the nervous tissue is frequently the result of inflammation, M. Dubois still insists that this lesion is often produced by special causes, altogether independent of inflammation. In individuals, he remarks, who are exposed to the influence of the different preparations of lead, a general induration of the nervous centres has been detected, unaccompanied by any trace of irritation, either in the organs themselves, or in their envelopes. According to the author—

"The symptoms arising from induration of the nervous centres may be divided into two very distinct series. 1st. Acute inflammatory symptoms. These depend almost invariably upon general induration, or accompany partial induration with

inflammation of the tissue. 2nd. Various symptoms, of a spasmodic character in some cases; apoplectic in others; intermittent, chronic, &c. These are connected with partial indurations; indurations which Lallemand denominates cicatrices, and which, we believe, may act as foreign bodies, and, in this manner give rise to accidents of a greater or less degree of severity."

The views of the author in relation to effusions of serum or drop-sies within the nervous centres are perfectly sound, and accord with those of the most eminent modern pathologists. His remarks in relation to effusions of blood or haemorrhages of those organs, though in general correct, are by no means so satisfactory.

The chapters which follow, treat of wounds and alterations of structure of the nervous system; in these we find nothing which calls for any particular comment.

Having thus considered the several abnormal states of what he denominates the central and peripheral portions of the nervous system, M. Dubois enters next into the investigation of the *neuroses*, or, in other words, those groups of morbid phenomena which have been erected by nosological writers into so many specific diseases of the nervous organs. While we admit that such groups of symptoms do frequently present themselves, and that to a certain extent they originate from lesions of the brain and spinal marrow, we must confess that we have not much respect for the plan pursued by the author in their investigation; it is neither adapted to a system of general pathology, nor calculated to lead to any important practical results.

In treating of the morbid condition of each portion of the nervous system, and we should be inclined to subdivide that system to a much greater extent than has been done by M. Dubois, all the phenomena, whether primary or secondary, resulting from the several lesions to which it is liable, should be clearly and methodically stated by the general pathologist. It is the province of special pathology to consider these phenomena in the groups in which they generally present themselves, to enter into their analysis and to refer each to the particular lesion by which it is produced. The same thing is true of many of the neuroses, as was noticed when speaking of the fevers of nosologists; that is, they are extremely complex diseases, originating often in the abnormal state of very different organs from those subsequently affected.

The following is the author's definition of the neuroses; a class of affections, we may remark, to explain the peculiar phenomena of which has, at almost every period of our science, exercised the ingenuity of physicians, and upon the real character of which, it is only very recently that any degree of light has been shed, and this has been the conse-

quence of a closer investigation of the structure and physiology of the different portions of the nervous system, and a more accurate examination of their several morbid conditions.

"There occurs," remarks M. Dubois, "in the nervous system, a very peculiar order of diseases, denominated neuroses; that is to say, diseases which consist frequently in simple organic actions abnormally executed. These abnormal actions may be referred to two distinct classes. The first, including lesions of sensibility, the second, lesions of contractility. These lesions have been termed neuroses, because, on the one hand they are to be referred to the nervous system, and, on the other, they do not ordinarily give rise to any very decided change in either the circulation, nutrition, or secretions; that is, they do not always produce a change in these functions of the organism to an extent sufficient to cause an alteration in the anatomical condition of the affected tissues. Thus, when in consequence of an acute pain, a local or even general reaction occurs, the local excitation does not amount to inflammation, and the general excitement abates with the pain which occasioned it. When the neuroses are accompanied by an altered state of the secretions, this is confined solely to those secretions which are discharged externally; it is also temporary, and is never connected with an abnormal state of the tissues. When, finally, there is alteration of nutrition, it affects the entire organism, producing a general emaciation, which is at first unattended with a change of organization in any of the tissues. This, however, is not invariably the case throughout the entire course of these diseases. It is impossible that the occurrence of repeated lesions of sensibility and contractility should not finally cause a lesion of the tissues. This will be readily understood, when it is recollect that the normal execution of all the functions of assimilation, demand a particular mode of sensibility,—now, the sensibility being so frequently altered in the course of the neuroses, must finally give rise to permanent lesions of the circulatory, nutritive, and secretory functions. Every disease, is in fact, at its commencement, a neurosis. The only pathological difference which exists between the affections denominated organic and those termed nervous, is that, in the first, the nervous period is frequently of such short duration as to be inappreciable, being followed instantaneously by the organic lesion, while, in the second, the patients complain of morbid sensations, and we observe in them abnormal movements long before we can detect any material change in the tissues."

The definition of the neuroses presented in the commencement of the above extract is completely modified in its conclusion. The author has himself shown that this class of affections, so far from being entirely unconnected with any local disease of a decided character, are sooner or later accompanied, almost invariably, by very important lesions of structure.

In the class of neuroses the author includes, 1st, lesions affecting the sensibility of the nervous system; cephalalgia, hemicrania, neuralgia, &c. 2nd. Convulsive affections, including epilepsy, chorea, hysteria, tetanus, hydrophobia, delirium tremens, &c. &c. 3d. Mental diseases; idiocy, mania, monomania, dementia.

It is very evident that the morbid phenomena characteristic of the foregoing maladies are immediately dependent upon an abnormal state

of the functions of the nervous centres, and this fact is sufficient evidence to the physiological physician that the latter organs are themselves the seats of disease. In many, perhaps in most of the neuroses, as they are termed, it would be incorrect to say that at their commencement the morbid state of the brain or spinal marrow amounts to genuine inflammation, or consists in an evident change in the texture of the affected organ. It may be that the derangement of the functions of the nervous centres is merely symptomatic of disease affecting some remote organ, and so intimately dependent upon the latter as to disappear immediately when it is removed. It is unquestionable that the nervous centres may be subjected to a degree of irritation, for we must persist in the use of this term, notwithstanding the objections made to it by M. Dubois, which, in numerous instances, may exist, or recur for a certain length of time, without giving rise to any evident change in the organization, but sooner or later we know that such a change, to a greater or less extent, does occur. And unless we are prepared to reject a series of observations of unquestionable authority, we must likewise admit that the phenomena of certain of the neuroses are, occasionally, either immediately dependent upon well marked inflammation of particular portions of the brain or spinal marrow, or are the result of changes of structure in these organs produced by inflammation. The attempt to ascribe any class of diseases to mere functional derangement of the organs, in the sense in which this term is employed by a certain class of medical writers, is founded altogether upon erroneous views of pathology.

The remarks of the author on cephalalgia are vague and unsatisfactory. He restricts the term cephalalgia to pains seated in the nervous centres, and independent of any appreciable organic lesion. He admits, that, in many cases, however, cephalalgia is symptomatic of various affections of the brain itself, or of some other organ more or less remotely situated, and notices the influence of disease of the stomach in its production. Many persons, he observes, anticipate the occurrence of cephalalgia the moment they experience a derangement of their digestive functions; but, in other cases, the disorder of the stomach is, he asserts, consecutive; the pain of the head first occurs, and is succeeded, sooner or later, by loss of appetite, nausea, and even vomiting. That, even under the last mentioned circumstances, the cephalalgia is not symptomatic of gastric irritation, the author has failed satisfactorily to prove.

Upon the pathology of the neuralgia, the subject next in order, the author has not succeeded in throwing any additional light.

Into the consideration of the convulsive affections he enters at considerable length.

"We do not propose," he remarks, "to treat separately of *convulsions*, because, as has been correctly observed, they are merely symptoms which accompany a variety of diseases, and to treat of every symptom as a separate affection would be to reduce medicine to a genuine chaos. But, as in many diseases, the most striking phenomenon consists in the sudden and involuntary contraction of one or more muscles, continuing for a longer or shorter period, and often attended with pain, we have denominated such affections convulsive, and have referred them to the neuroses, because their invariable characteristic consists in the abnormal state of muscular contractility just referred to. From this class, as will be readily conceived, we have separated arachnitis, encephalitis, and all those lesions of the nervous centres, in which, independent of the convulsive phenomena, there are, likewise, alterations of tissue, which give rise to other symptoms."

Had we sufficient space to allow us to enter into an examination of the leading pathological facts, established by repeated observations, which relate to those convulsive affections classed by M. Dubois among the neuroses, that is, diseases in which the nervous functions are disturbed without any appreciable change in the condition of the brain or spinal marrow, it would be easy to show that the opinions of the author in relation to these affections are to a very great extent purely hypothetical. That in many at least of the convulsive diseases there is a decided irritation, accompanied with very evident afflux of fluids, of some portion of the nervous centres, amounting often to positive inflammation, and giving rise very generally to changes in the physical condition of the parts in which it is seated is incontestibly true. That such is the case the author has, in fact, himself indirectly acknowledged. Speaking of the causes of infantile convulsions, he remarks:—

"Most frequently the process of dentition excites towards the brain a dangerous *molimen*—in other cases it is a reaction, depending upon the state of the digestive organs; the presence of intestinal worms acts then upon the nervous system: often a state of plethora may become the occasional cause of convulsions."

"Females of a very plethoric habit are particularly predisposed to *eclampsia*, and especially such as are pregnant for the first time. M. Desormeaux adds, that we may also include among the causes of this affection, all those circumstances which dispose the brain to become the centre of fluxion, and which determine the blood with increased impetus towards that organ. These causes had been pointed out by M. A. C. Baudelocque, in his inaugural dissertation."

So constantly, indeed, are the convulsions of infants and puerperal females preceded and accompanied by symptoms of irritation of the brain, accompanied by an increased afflux of blood to that organ, the fact of which is further established by the nature of the remedies which experience has shown to be most successful in the removal of the affections, that we were surprised to find them included by M.

Dubois in his class of neuroses. That after death, in many cases, no evident marks of an increased turgescence of the encephalic vessels can be detected, is no positive evidence that such turgescence did not exist previously.

The chapters on epilepsy, chorea, and catalepsy, present a very excellent, but very condensed, history of these affections, and of their remote and exciting causes. In regard to their pathology, however, the author contents himself by stating that they all depend, so far at least as regards their convulsive phenomena, upon some inexplicable derangement of those functions of the nervous system which preside over muscular action, independent of irritation or inflammation of the brain, or spinal marrow. The mass of facts accumulated in regard to the morbid anatomy of these diseases, by the most accurate observers, and the legitimate inferences to which such facts appear to lead, are entirely overlooked by the author, or set aside as altogether irrelevant or inconclusive.

We had so frequently heard the monograph upon hysteria, published about two years ago by M. Dubois, referred to in the highest terms of commendation, that we expected, in the chapter of the present treatise devoted to that disease, to meet with some new and interesting views in relation to it. But though we are there presented with an admirable description of its symptoms, the order of their occurrence and cessation, yet, so far as it regards the pathology of the disease, we are left, generally speaking, as much in the dark as ever. With the doctrine recently advanced by one or two English writers, which refers the production of hysteria to spinal irritation, and which certainly demands some degree of attention from the facts adduced in its support, M. Dubois appears not to have been acquainted. The following extract will enable the reader to judge of the author's views of the pathology of this affection:

"In hysteria, the *vital power*, sur-excited in one point of the organism, namely, in the uterine apparatus, reacts upon the cerebro-spinal axis. It is this sur-excitation of the vital power which, by its *violent influence*, sometimes exalts the moral faculties, and sometimes suspends the operations of the intellect, exciting sympathetically convulsions of the principal muscles of locomotion. It is it, finally, which frequently exhausts the *nervous influx*, so as to produce a state of apparent death, and frequently gives rise to paralysis and spasmoid retractions, more or less extensive and permanent. In regard to the primitive lesion experienced by the uterus, we have reason to believe that a *simple nervous modification* is sufficient to occasion the majority of the general symptoms, in consequence of the connexions which exist between the uterus and the rest of the economy, and of the *special and powerful* nature of the nervous lesion alluded to. The partisans of the theory of irritation do not reason physiologically, (query, does the author?) when they assume the necessity of a chronic gastro-enteritis, or metritis, to pro-

duce the convulsive paroxysms of hysteria; as they must be aware that, in the great majority of cases, inflammation of the digestive organs and of the womb are unaccompanied by any symptom of hysteria: they have been forced to add that to produce the latter, it is necessary there should exist likewise a particular state of the nervous system. This, however, does not remove the difficulty; it remains to be shown in what this peculiar condition of the nervous system consists—but all researches as to this particular have been fruitless."

We would here inquire whether M. Dubois means to infer that the nature of the "special and violent nervous lesion," to which he refers the production of the convulsive phenomena of hysteria, has been more clearly determined by observation than that of the "nervous irritation," by the existence of which those of the physiological school attempt to explain these symptoms?

"It is found," says our author, "that the uterus, so far from being (*always*) inflamed in hysteria, is not even affected with pain. It is true, that Diemerbroeck, Valsalva, Morgagni, and other writers, state that they have discovered in the bodies of hysterical females, after death, numerous morbid changes in the uterine system; but we may add, that similar diseases have existed without the occurrence of any symptoms of hysteria, while in females evidently hysterical the uterine organs have been found in their normal condition."

All this is perfectly true; but we cannot perceive in what manner it militates against the truth of the doctrine it is brought forward to oppose.

The proximate cause of tetanus, M. Dubois considers "to be equally unknown to us, as is the nature of that power which causes in the muscles of animal life their normal movements." He denies explicitly that the disease depends upon irritation or inflammation of the brain or spinal marrow, or of their membranes, or upon any sensible organic change in either.

Hydrophobia he describes as being produced by the insertion into the system of the saliva of a rabid animal; which saliva, being possessed of a poisonous property, causes a lesion of the nervous system, of the nature of which we are entirely ignorant. This lesion is, in the first instance, unattended with any evident organic change in the nervous or other tissues; it may, however, he admits, in certain cases, produce an inflammation, to a greater or less extent, of the brain, spinal marrow, or their meninges, as well as of other organs, but not necessarily or invariably.

We pass over the chapters on nervous tremors and delirium tremens, which brings us to the all-important class of mental diseases.

It is impossible for us to enter fully into the consideration of this copious subject; since to test the accuracy of the doctrines advanced by our author in regard to the causes and character of the various mental diseases, would require us to discuss at some length the physiology

of the brain and the philosophy of the intellectual faculties generally, as well as to notice, to a certain extent, that immense and interesting collection of facts in relation to their pathological conditions, that has been accumulated by the industry of many of the most eminent medical observers. We may be permitted, however, merely to say, that we hold the following propositions to be now fully established, namely:—1st. That all mental diseases, properly speaking, depend upon an abnormal state or condition of some portion of the cerebrum. 2nd. That this condition may be either the effect of causes acting directly upon the brain, or may result from disease existing in other organs, the brain being affected secondarily; and 3d. That the affection of the brain, in many cases of mental derangement, amounts to an actual change in its organic structure.

M. Dubois observes, that he has made a separate class of the mental affections, "because they do not consist exclusively in either lesions of sensibility or of contractility. They are organic acts, but acts of an extremely complex character."

The chapter on congenital idiocy is a very excellent one. The author correctly remarks, that there exist material conditions of the brain, or vices of conformation, which readily explain the non-development of the intellectual powers. The admission that this abnormal condition of the mental functions is dependent upon a material lesion of the brain, will, however, we conceive, remove it from out the author's class of nervous diseases, which, we are to recollect, are unconnected with any evident organic change in the nervous organs. Of this he appears to have been aware, for when speaking of the anatomical lesions existing in cases of idiocy, he observes:

"The neuroses, according to our definition, it is true, consist in certain *morbid actions*, which do not appear to be dependent upon any *permanent anatomical lesion*, but which may nevertheless recur under the influence of certain *Anatomical conditions* readily appreciable."—"Many of the irregular manifestations of the mental faculties may be connected with an evident and permanent abnormal state of the intellectual organs."

The whole of the author's remarks upon mania, its causes, symptoms, nature, and anatomical lesions, are embraced in about twelve small octavo pages. It must be evident, therefore, that, however excellent in themselves, they are far too brief and general to present any thing like a full elucidation of this highly important and, at the same time, obscure subject. He attaches, in our estimation, too little weight to the leading facts and arguments adduced by recent observers in relation to the pathology of the different forms of mania. That a disease of such long continuance, and so untractable in its character, and presenting, in its phenomena, evidence of so complete a subver-

sion of the normal functions of so delicate and important an organ as the brain, should consist merely in a change of vitality, unaccompanied by any evident change in the organic condition of the affected part, we should hardly suppose *a priori*, and we find it to be in direct opposition to the evidence deducible from a very extensive series of apparently accurate observations. It is true, the author does not assert formally that such is the case—but from the manner in which he disposes of the autopsical phenomena described by different writers as occurring in persons who have died of mania, it is evident that he considers the traces of disease discoverable in the brain and other organs, as of very little or no importance, in accounting for the production of that disease.

That we are unable to explain why a certain lesion of the brain should produce derangement of the mental faculties, cannot be adduced as evidence that such lesion has no agency in its production. If it can be established that irritation, inflammation, or other abnormal conditions of certain portions of the brain, are very commonly attended by mental derangement, we have arrived at a positive fact in relation to the pathology of the latter, the importance of which, in directing our subsequent investigations into the true nature and causes of the disease, and into the means adopted for its prevention and cure, can be readily estimated.

In regard to monomania, M. Dubois remarks, that—

"In the human mind there exist two kinds of ideas: the one foreign to *self*, and indifferent to the well-being of the individual by whom they are conceived—the other relate to his affections, his mode of existence, and are essential to his present or future happiness. In the normal state of his organism, he occupies himself with the latter more than with the former. When an abnormal state occurs, and he occupies himself with them exclusively, he becomes monomaniac."

The author divides monomania into several varieties, the principal of which are the hypochondriac, melancholic, suicidal, homicidal, religious, erotic, ambitious, &c. Under the hypochondriacal variety he includes nostalgia, and imaginary hydrophobia.

Hypochondriacal monomania is described as a disease of the mind, characterized by an excessive and constant fear of being the subject of strange and imaginary diseases, or by the strong persuasion that any real disease under which the patient may labour will terminate fatally. In the first period of the affection, there exists, he maintains, no real or organic lesion of the brain or other organs; but, subsequently, in consequence of the patient's attention being constantly and anxiously directed to the condition of his digestive or circulatory organs, every unusual and transient sensation occurring in them being magnified into the symptoms of some serious and fatal disease, his regi-

men being at the same time modified, and a highly improper course of treatment pursued in accordance with those diseased conceptions, the functions of the stomach or heart become, at length, morbidly affected, giving rise at first to the symptoms of gastralgia, or some nervous disorder of the heart, and finally to chronic gastritis, latent or partial pericarditis, hypertrophy of the heart, or other organic change in the digestive or circulatory organs.

"There is nothing, however, to prove the existence, in hypochondriasis, of a cerebral irritation, resulting from a preceding chronic gastritis, as supposed by Broussais and his partisans. Every thing, on the contrary, tends rather to prove that, during the latter period of the disease, such irritations occur but very rarely. After death, we sometimes, it is true, discover organic lesions of the brain and its appendices, but these lesions, which by no means succeed invariably to encephalic irritation, are to be ranked, even when the latter has been the case, among those secondary affections which constitute the third period of hypochondriasis."

Our readers will be able to judge from the foregoing, of the pathological views of M. Dubois in relation to monomania generally, for he remarks that what he has laid down concerning hypochondriacal monomania, is in part applicable to the other varieties.

"In other words, their point of departure is the same; and their symptoms, although very different in character, have a similar connexion or filiation. Their terminations, however, differ; in the greater number of cases, the remaining varieties of monomania eventuate in complete and genuine mania, sometimes even in fatuity."

The consideration of the mental affections concludes with an account of fatuity, or consecutive imbecility of mind, and somnambulism.

The remainder of the treatise is devoted to an investigation of the pathological states of the vascular, serous, muscular and fibrous, cartilaginous and osseous, mucous and cutaneous tissues. Many important and unsettled questions in pathology are connected with the diseases of these portions of the organism, all of which demand a very thorough examination, yet, from the space we have already occupied, we find that we shall be under the necessity of passing them over without notice, and of closing our review with merely a passing comment upon one or two of the subjects included in this portion of the work.

In the chapter on inflammation, as it affects the capillary vessels, we expected to meet, if not with any novel views upon this important subject, at least with a very full exposition of all the facts connected with it. The agency of the capillary tissue in the production of the phenomena of inflammation, has a very direct bearing upon the pathology of an extensive class of diseases, of more frequent occurrence, perhaps, than any other, and therefore demanding a very close investigation in a system of general pathology. But we confess a perusal

of the chapter has disappointed us. The author has done little more than briefly state the differences of opinion which exist among physicians as to the actual condition of the capillaries in a part labouring under inflammation, and the difficulties attending the correct investigation of this particular, for which he is mainly indebted to the work of Dr. Thompson. Few chapters in the present treatise are characterized by a greater degree of vagueness, or containing so few facts calculated to lead to satisfactory conclusions, than the one under consideration.

In the short chapters devoted to inflammation of the serous tissue, and to dropsy of the cavities lined by the latter, M. Dubois has presented a very correct, but at the same time superficial, digest of the present state of our knowledge in regard to these subjects. We recognise as correct the doctrine which refers all dropsies, either to an inflammatory affection of the serous and seroid membranes, or to causes, whether vital or physical, by which the free return of the venous blood from the affected cavities is impeded or prevented.

Rheumatism, according to our author, is a disease proper to the muscular and fibrous tissues. He denies, however, that it is an inflammation, and this chiefly from the fact that suppuration never occurs in the parts affected; the formation of pus being considered by him as the true characteristic of genuine inflammation. When, however, we examine with due attention the exciting causes of rheumatism, the phenomena characteristic especially of its acute stage, as correctly detailed by our author, together with those remedies, generally speaking, which experience has proved to be the most successful in its removal, we can scarcely deny that the disease is an inflammation seated in the fibrous tissue. That this inflammation differs in some of its phenomena and in its effects from inflammation occurring in the cellular, serous or mucous tissues, is very freely admitted; but at the same time it must be remarked, that it does not differ from the latter to a greater extent than phlegmon or pleurisy or pneumonia differs from gastritis, cerebritis, or colitis. The fact, which cannot be too much insisted upon, that the phenomena and results of inflammation differ according to the difference of the organization and functions of the tissue in which it occurs, has been in a great measure overlooked by M. Dubois. Rheumatism is an inflammation strictly of the fibrous tissue; and, as Bichat has pointed out, and our author has fully admitted, inflammation of this tissue never gives rise to suppuration.

We have thus endeavoured to present to our readers a general view of the plan of the treatise before us, and of the views of its author, in

relation to some of the more prominent subjects which it embraces. We are aware that our notice of the work is, in many particulars, imperfect and superficial, notwithstanding we have extended it beyond the length usually allowed to articles of this kind. This, however, could not well be avoided; it is to be recollectcd, that M. Dubois has not confined himself to those particulars which fall strictly within the province of a system of General Pathology; but enters likewise into an examination of the nature, causes, symptoms and treatment of the principal groups of morbid phenomena, which constitute the diseases of nosological writers. To do justice to a work of so extensive a character, including subjects so important, and at the same time so copious, upon many particulars in relation to which some of the most distinguished pathologists of the present day are still divided in opinion, would swell our review almost to the same bulk as the work itself.

We have expressed our opinions freely, in regard to the opinions of M. Dubois, whenever we have believed them to be erroneous; and though we differ from him materially in many of his pathological views, and are convinced that in not a few instances he has overlooked or denied the facts recorded by the more recent observers, and in others, has mistaken the legitimate conclusions deducible from such as he admits to be fully established, yet we should be doing gross injustice to him, were we to deny to the work, taken as a whole, a very considerable degree of merit. It contains, unquestionably, a large amount of valuable matter. The author's therapeutical directions, in particular, notwithstanding they are of a very general character, are all of them peculiarly excellent.

D. F. C.

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ART. XII. *A treatise on the formation, constituents, and extraction of the Urinary Calculus; being an essay for which the Jacksonian prize for the year 1833, was awarded by the Royal College of Surgeons in London.* By JOHN GREEN CROSSE, Surgeon to the Norfolk and Norwich Hospital, and Lecturer on Clinical Surgery, Member of the Royal College of Surgeons, and Fellow of the Royal Medical and Chirurgical Society of London; Corresponding Member of the Société Médicale d'Emulation of Paris; Formerly Demonstrator of Anatomy in the University of Dublin, &c. &c. "Feci quod potui, non ut volui." Quarto pp. 231, plates 29—London, 1835.

It is a rare and delightful task for the reviewer to canvass the